

Official title Investigating Psychosocial Predictors & Employment Outcomes of Enhanced IPS
Intervention A Prospective Cohort Study

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Full Title Investigating Psychosocial Predictors & Employment Outcomes of Enhanced IPS Intervention A Prospective Cohort Study

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Educational Programme Professional Doctorate, Queen Margaret University

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Study Description

Psychosocial factors influence successful attainment of employment; however, factors are poorly defined and overlapping and lack consistent measurement. This study aims to apply a theoretical perspective to the investigation of these psychosocial factors.

The model of human occupation (Kielhofner 2008) provides a dynamic systems model to understand psychosocial factors influence on participation in occupations. An associated measurement tool the worker role interview, WRI (Braveman et al., 2005) provides a valid and reliable measure of psychosocial factors influence on the ability to attain employment.

The purpose of this cohort study, using an existing database, is to seek to describe the relationship between psychosocial factors (independent variables) and employment outcomes (dependent variables) in a population of people with complex mental health problems receiving evidence-based supported employment (EBSE) augmented with theory-driven occupational therapy interventions. The intention is to understand the predictive nature of psychosocial factors on the positive outcome of success in achieving paid employment and the negative outcome of no success in obtaining paid employment. The WRI is routinely used in the research site; an NHS occupational therapy led vocational rehabilitation delivering EBSE service for people with complex mental health problems. An existing database of initial assessments and employment outcomes is available for investigation.

EBSE is an evidence-based approach to support people with mental health problems into employment. The theory-driven occupational therapy intervention is informed by MOHO (Kielhofner 2008).

This study will investigate the relationship between psychosocial factors and employment outcomes in a population of people with complex mental health problems receiving evidence-based vocational rehabilitation? This study will aim to describe the relationship between psychosocial factors, as measured by the worker role interview (Braveman et al., 2005) on employment outcomes in a population of people with complex mental health problems receiving evidence-based vocational rehabilitation?

- a) To predict the positive outcome of success in achieving paid employment
- b) To predict the negative outcome of no success in achieving paid employment

The intention is to deductively test, using logistic regression, a theory of how identified

psychosocial variables may predict the outcome of employment goals. In contrast to correlation analyses (or simple regression), where we are limited to comparing a single predictor with the outcome (Field, 2015), multiple regression will afford the opportunity to construct models which simultaneously examine the effects of all predictors (Gelman and Hill, 2006). Psychosocial variables will be measured using the WRI (Braveman et al., 2005).

The study context

The cohort study (de Win et al., 2007, Jager et al., 2007, Siriwardena, 2012) will be undertaken utilising a secondary dataset (Smith et al., 2011) from an established vocational rehabilitation service (VRS). This service is experienced in providing intervention based on EBSE (Bond, Becker and Drake, 2011a) with established high fidelity to the model. The team's interventions are also guided by the model of human occupation, MOHO (Kielhofner, 2008) and the WRI is routinely completed with all patients accessing the service.

The consistency of intervention will be ensured as the service is routinely appraised for fidelity to the EBSE by two experts, using a standardised assessment tool the EBSE fidelity scale (Bond, Becker and Drake, 2011b) and the team has received ongoing training and regular caseload supervision to integrate evidence-based occupational therapy into practice. The experts appraising the service are independent of both the clinical service and the proposed research.

Secondary Data Collection

The established VRS provides an assessment and intervention for people with complex mental health problems. A dataset has been routinely collected over several years which is currently used to evaluate the service. Using secondary data enables researchers to address high impact research questions with significantly less time and resources than would be required in a study involving a primary data collection (Doolan and Froelicher, 2009, Smith et al., 2011, Cheng and Phillips, 2014, Okafor et al., 2016).

Secondary data offers access to large sample sizes, relevant measures (in this case the WRI) and longitudinal data that is readily available, allowing insights into trends within the phenomena of interest (Smith et al., 2011). Moreover, the use of data collected as part of a routine clinical practice provides researchers with real-life data to test new hypotheses relevant to practice models.

To address limitations of secondary data analysis the researcher has an established relationship with clinicians in the VRS and was involved in the selection of routine measures now used to evaluate the service. In this context, the WRI was selected as an appropriate initial assessment and outcome measure for service evaluation, and clinicians have routinely used this measurement tool for each person accessing the service it is, therefore, possible to be confident that a consistent and standard dataset is available for analysis. Ongoing training and consultation have been provided by the researcher to the clinical service to ensure the data quality and that any nuances and glitches are highlighted and addressed quickly to minimise risk to reliability and validity.

Data Collection

To ensure the quality of the data and to minimise missing data while protecting identities of service users, the data will be managed and transferred by a trained researcher on site at both services. The researcher is a senior research fellow employed at Queen Margaret University and holds an honorary contract with NHS Lothian. Data will be robustly anonymised prior to transfer. Data will be transferred from NHS secure network to secure network within Queen Margaret University using an NHSmail, a secure email service approved by the Department of Health. Once data is collected, it will be managed and prepared for analysis by the researcher supported by a trained statistician.

The dataset comprises

- Research ID code
- Gender
- Age on Admission
- Ethnicity
- Marital Status
- Living situation (alone/shared/supported accommodation)
- Quintile range of Scottish Index of Multiple Deprivation
- Educational attainment
- Previous employment
- ICD10_CODE
- Worker role interview items
 - Date of assessment
 - WRI Assesses Abilities & Limitations
 - WRI Expectation of Success in Work
 - WRI Takes Responsibility
 - WRI Commitment to Work
 - WRI Work-Related Goals
 - WRI Enjoys Work
 - WRI Pursues Interests
 - WRI Appraises Work Expectations
 - WRI Influence of Other Roles
 - WRI Work Habits
 - WRI Daily Routines
 - WRI Adapts Routine to Minimize Difficulties
 - WRI Perception of Physical Work Setting
 - WRI Perception of Family and Peers
 - WRI Perception of Boss and/or Company
 - WRI Perception of Co-workers
- Employment goal
- Date of final goal review
- Outcome of goal (successful/ unsuccessful in attaining employment)

Sample

The most widely-used suggestion for estimating sample size for multiple logistic regression is 20 observations per variable included in the model (Harrell, 2001). At 20 observations per variable, and estimating that we will investigate ten variables, we would, therefore, require 200 observations.

Therefore, at proposal stage we intend to aim for a minimum sample size of 200, liaison with the VRS has provided reassurance that this is achievable.

The dataset of participants who meet the inclusion criteria will be determined by the clinical care team within the vocational rehabilitation service. All complete data gathered from participants who have provided informed consent will be accessed.

Inclusion criteria

Participants who meet the inclusion criteria of the clinical service (as below)
Individuals have self-referred to the service as motivated to participate in employment
Individuals must be currently supported by community mental health teams

Individuals must have the capacity to consent and have given consent to participation in the service and for information regarding their case to be shared with NHS staff.

Exclusion criteria

Lack capacity for informed consent.

Refusal or withdrawal of informed consent

Incomplete assessment data on commencement of engagement with vocational rehabilitation service
Withdrawal from participation in service before outcome data (obtained/did not obtain employment being recorded)

Analysis Plan

The collected data will be subject to analysis with the use of multiple logistic regression (Gelman and Hill, 2006) using the R data analysis software (R Core Team, 2015). Multiple logistic regression will allow us to address our research questions by constructing models which examine the effects of psychosocial predictors on the probability of a person with complex mental health problems attaining (or not attaining) paid employment (McCullagh and Nelder, 1989). Independent variables will be examined using multiple logistic regression to model the likelihood of a person with complex mental health problems attaining (or not attaining) paid employment. Possible confounds which may influence outcomes will be controlled for (e.g. age, gender, educational achievement, history of employment). Interpretation of the analysis will be shared and discussed with clinicians who are expert in their field to ensure that findings are considered from both a statistical significance and clinical significance position (Sedgwick, 2014b).

Focus of Study

Schizophrenia Spectrum and Other Psychotic Disorders

Psychiatric Rehabilitation

Rehabilitation, Vocational

Employment, Supported

Psychosocial Support

Systems

Baseline Measure

Worker Role Interview Items - Psycho-social measure of readiness for employment

BRAVEMAN, B., ROBSON, M., VELOZO, C.A., KIELHOFNER, G., FISHER, G.S., FORSYTH, K., and

KERSCHBAUM, J., 2005. Worker role interview (WRI)(version 10.0). Chicago: Model of Human Occupation Clearinghouse, Department of Occupational Therapy, College of Applied Health Sciences, University of Illinois at Chicago.

Primary Outcome Measure

Attainment or non-attainment of employment.

